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ABSTRACT

There is a general oversupply of teachers. Attempts to regulate teacher supply and demand are flawed by assumptions that teachers are a limited consumer item and that the school system will persist in its present form. The financial crises of schools, the demand of acccuntability, and the challenge to the principle of compulsory education indicate that the schools of the future will be greatly changed, even to "school" occurring in many settings. The new pluralish of institutions and the demand for knowledge utilization to solve societal problems, should be reflected in the training of teachers. To meet future needs, colleges and universities, whose training programs are being called ineffective, would have to conduct research to determine the learning needs of teachers. As reflected by trends in society and schools, these future needs relate to development and use of technology, development and use of work study programs, and provisions for equal opportunity, (JA)

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# COMMENTS ON SHAPIRO REPORT

There are over 1,000 colleges and universities as well as countless school systems in this country that are actively involved in education personnel preparation and retraining, individually and through various cooperative and consortium type arrangements. In addition, there are many persons at state and federal levels and in the private sector whose jobs revolve around teacher education. Further, there are thousands in the professional ranks of the disciplines who, knowingly or not, have an important and direct impact on the quality of those who staff the schools of the nation. This book should be studied by all of these people.

Some say that if there is an oversupply of teachers in the land, then we ought to divert some of the resources used for teacher education to other activities. The readers of Shapiro's book will quickly reject this solution.

This is an important book for anyone who has a role to play in the allocation of resources for education personnel preparation and retraining. Shapiro develops a notion of supply and demand that has important implications for planning and decision-making in higher education, especially that performed by administrators in colleges and schools of education, those in central planning agencies of colleges and universities, and those in the newly established state commissions on postsecondary education.

Shapiro expands the notion of schools to include a much larger environment than that traditionally attributed to them. The community becomes the school. One is led to understand that an *oversupply of teachers* can coexist with an *undersupply of persons adequately prepared* to handle the education of American youngsters.

The book clearly and optimistically suggests the importance of using resources in new and creative ways in education personnel preparation and retraining. It helps us to reconceptualize the surplus problem in a way that indicates that there may indeed be a considerable shortage of people capable of delivering the kinds of services that education personnel ought to provide. The implication of this concept is that simply reducing the number of teachers produced is no solution at all.

Educational planners should do a better job of identifying needs and establishing goals with the intent of reforming and reshaping teacher education programs. There is need for serious educational reform efforts that cannot be implemented by simply shutting down current programs and starting different ones. Higher education has a key role to play in planning, program development, and implementation of these efforts. Higher education must become more aggressive and creative in the area of education personnel preparation and retraining to address itself to the mandate suggested in this book.

**Edward C. Pomeroy**
Executive Director
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# THE SUPPLY AND DEMAND OF TEACHERS AND TEACHING

By Evelyn Zerfoss and Leo J. Shapiro

SP 006 570

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## FOREWORD

Statistics which give an accurate view of the teacher surplus and an idea of its probable duration are of vital importance to the Study Commission on Undergraduate Education and the Education of Teachers, because the Commission is charged by the U.S. Office of Education to concern itself with reforming of undergraduate education—particularly as it relates to future teachers.

Though there are several government agencies which gather and interpret data of this kind, the Commission was impressed with Leo Shapiro's idea of extending projections of data beyond 1980. "If we use a longer sheet of paper, we can project our figures to 2000," was Shapiro's notion of research, and as a result, he was able to predict a possible end of the teacher surplus by 1985 or 1990. But the surplus—no matter how long it lasts—is not as important to consider as the changing conceptions of schools and teaching which are anticipated, Shapiro notes.

On the basis or preliminary research, the Commission asked its Information Committee to complete the study for publication. Shapiro, chairman of the committee, received a Ph. D. in sociology from the University of Chicago in 1951 and has been director of research for Science Research Associates. He spent seven years as statistician, economist and survey technician for the Federal Bureaus of Labor Statistics, Census, and Agricultural Economics and then served as a government consultant for several years. For the past 15 years, Shapiro has been chairman of Leo J. Shapiro and Associates Inc., a Chicago-based market research firm.

Evelyn Zerfoss, who assisted in the writing and editing of this study, is a former member of Shapiro's staff and a teacher of psychology at Elmhurst College at Elmhurst, Illinois. She received her master of arts degree in educational psychology from the University of Chicago.

**Paul Olson, Director**
**Study Commission on**
**Undergraduate Education and**
**the Education of Teachers**

## PREFACE

The research for this paper originally focused on two topics. One related to the current supply and demand of elementary and secondary school teachers. The second focused on how to provide a proper supply of teachers to meet anticipated school demands in the future.

As the reader will discover, it soon became clear that the second question is inappropriate in today's changing school structures. It has become necessary to shift the focus from the supply and demand for teachers in schools, to the supply and demand for teaching, both in and out of schools.

Two themes ran through all the research, whether we were looking at schools, or the larger society. One theme is that of options and alternatives. Many persons and groups reject lockstep education which leads toward "locked-in" or "locked-out" roles and positions in society. Dialogue centers on ways to create and legitimate a range of options, and ways to limit and prohibit options judged to be exploitative, irresponsible, or antagonistic to other interests in the larger society.

The second major theme is accountability. There is a demand from all quarters that societal institutions be made accountable to the persons they serve. An institution which perpetuates itself for its own self interest, or which serves powerful vested interests, is perceived as illegitimate. In line with this theme, schools are increasingly asked to respond to students' needs, and to be responsible to students.

This report is organized into five chapters, each of which deals with a particular set of research questions. Preceding Chapter I is a mini-report which summarizes, for fast reading, the research findings and recommendations.

# MINI-REPORT:

# A SUMMARY OF RESEARCH FINDINGS

# AND RECOMMENDATIONS

**CHAPTER I. To what extent is the present alleged oversupply of teachers a fact? What methods are being suggested to regulate teacher supply and demand? Are these methods realistic?**

A teacher oversupply exists and will soon become acute although shortages continue in certain areas. Remedies which have been proposed to regulate teacher supply and demand assume that the school will continue to exist in its present form, and that teachers will be needed by schools in numbers which reflect current notions about proper teacher-pupil ratios.

**CHAPTER II. Is the school likely to persist in its present form? How are schools in the future envisioned? Is it practical to plan for a supply of people to occupy the role of "teacher" in schools?**

Schools are in a period of radical structural and functional change. They are in the midst of a financial crisis. The principle of compulsory education has been challenged. The demand for accountability has raised questions about four of the school's main functions—custodial care, value formation, selection and screening, and cognitive education—relating both to the delegation of these functions to schools, and to the school's performance. Many alternative types of schools are envisioned for the future. Some critics envision the demise of schools entirely, and the establishment of new educational formats and structures. It is obvious that it is not practical to make long-term plans for a supply of teachers to occupy traditional roles in schools when the future structures and functions of schools are so uncertain. The evidence indicates that

school walls are becoming more permeable, if not crumbling entirely. Teaching of the young in the future is likely to occur in many settings. Thus, to assess future demands for teachers, it is necessary to look at what is going on outside schools.

**CHAPTER III. What are the major societal trends which affect schools and education? What kinds of teaching are going on outside the formal educational structure? How do societal learning needs relate to the question of teacher supply and demand?**

The knowledge explosion has created vast changes in societal needs. Traditional institutions are being outmoded; a new pluralism of institutions can be observed. There is an increasing demand that knowledge be utilized systematically to solve societal problems. This demand for knowledge utilization has raised questions of priorities and values, and has required the development of new ways of organizing for work. Educational efforts outside the formal structure have grown dramatically, reflecting the teaching-learning needs in a time of rapid change.

Societal trends suggest that the question of teacher supply and demand should be reformulated. Instead of asking "How do we meet the future demand for teachers?" it is more fruitful to ask, "What future demands for teaching can be anticipated, and how might they be responsibly met?"

**CHAPTER IV. What will be demanded of teachers and the teaching profession in the future, and how might these demands be responsibly met?**

Institutions of higher education, like all others, are being called to accountability; new demands are being made by students and the public, who charge that teacher preparation is inadequate, and that credentialing practices are an impediment to good education. If colleges and universities are to meet modern societal needs, they will have to assume an enlarged and difficult task—that of finding new ways to help persons who teach to perform more effectively. To do so, it is necessary to conduct on-going

research to determine the learning needs of teachers; to continuously develop responsive programs of study; to create new learning environments and educational structures; and, to provide easy access to continuing education. Some of the learning needs of teachers, indicated by trends in school and society, relate to: the development and supervision of work-study programs; new educational roles: understanding of the teaching-learning process; creation of alternative schools; changing skill requirements; the development and use of technology; accommodation of population waves; and, provision of equal opportunity.

**CHAPTER V. What obstacles are teachers likely to encounter as they look for teaching work in settings other than schools? What opportunities does the present oversupply of teachers present for both teachers and employers?**

Obstacles related to the fact that the majority of job-hunting teachers will be women include: problems of combining other kinds of jobs with maternal responsibilities at home; sex discrimination in many workplaces; low expectancies; and self perceptions of inferiority. There is a need to end institutional sex discrimination. Further, there is a pressing need to discover new ways to structure work to permit both men and women to combine a career with active parenthood, if they so desire.

The oversupply provides teachers with the need and opportunity to acquire experience in other settings. Such experience promises to be valuable as school walls become more permeable, and educational jobs increasingly require the ability to integrate the young into the functional life of the community.

Employers have a promising new group to tap. Because of their training, experience, sex, race, or cultural background, teachers are likely to have skills, inputs, and perspectives which are highly useful in the changing world of work.

# I. REGULATING THE SUPPLY AND DEMAND OF TEACHERS

**To what extent is the present alleged oversupply of teachers a fact? What methods are being suggested to regulate teacher supply and demand? Are these methods realistic?**

## CURRENT SUPPLY AND DEMAND

During the decade of the sixties, teachers were in short supply. The demand for teachers appeared to be unlimited as increased numbers of children bulged the schools. The shortage was well publicized. Many young students responded, choosing teaching as a career. In addition, older adults, particularly housewives, took up teaching as a second career.

The recruitment of teachers was highly successful. By the school year 1971-1972, the nation's elementary and secondary school systems were able to hire 2,359,000 teachers for the 51,800,000 students enrolled.[1] In addition to those teaching, an estimated 250,000 persons trained to teach were out looking for jobs.[2] The teacher shortage was over.

Although the shortage is over, large numbers of persons eligible to teach continue to be graduated each year. People are entering teaching at a faster rate than job opportunities in schools are created. The number of children of school age is declining, and is expected to continue to decline until 1980.[3] Thus, the supply of teachers is rapidly increasing at the same time the demand for teachers is decreasing. The Department of Labor projects a severe teacher oversupply by 1980 when it is anticipated that 4.1 million teachers will be competing for 2.4 million teaching jobs.[4]

The surplus appears to be widespread. According to a survey conducted by editors of *Nation's Schools* in October of 1971, 95 per cent of school administrators responding said they had noticed a substantial increase in the number of teacher applicants in their district during the past two years.[5] Some reported receiving as many as 75 applications per opening.

Despite the widespread surplus, many administrators indicated that there are still teacher shortages in certain subject matter areas, particularly science and mathematics; in some instructional areas such as special education and vocational education; and in selected geographical areas. Georgia, for example, faced a statewide shortage and reportedly needed 713 elementary and secondary teachers to fill positions mainly in rural county schools.

Many of the administrators surveyed were pleased with the opportunity to pick and choose among teacher applicants. Eighty-seven per cent of those responding indicated that the surplus had resulted or is likely to result in their hiring better teachers. However, other respondents pointed out that top quality teachers are always hard to find, whatever the supply of teachers in general, and that recruiting superior teachers still requires effort.

Whether the effect of the surplus will be entirely felicitous for schools is as yet uncertain. It may be that tenured teachers who are bored and disinterested and in need of a change will hold on to their jobs more tenaciously. Opportunities to hire more recently trained teachers may be limited by the immobility of incumbent, tenured teachers.

While the effect of the surplus on schools is not clear, it is clear that the surplus poses an immediate problem for teachers who find there are no job openings, and for schools of education which may be faced with the need to retrench.

## REMEDIAL ACTIONS PROPOSED TO DEAL WITH THE SURPLUS[6]

Remedial actions which have proposed to deal with the surplus generally reflect consideration for teachers, for colleges of education, or for schools. The remedies can be divided into proposals of three types, as follows:

—Fill all available teacher positions in the schools.

—Increase the total number of positions for teachers in schools.

—Reduce the number of teachers available for teaching positions.

To fill all available teacher positions in the schools, the following measures have been proposed:

—Redistribute teachers geographically. The Office of Education Commissioner's Annual Report in 1970 stated that 26 states reported shortages of applicants for regular classroom teaching jobs in rural areas. Six states reported shortages in small cities, four in central urban areas. Increased pay might be necessary to provide incentive for geographic relocation.

—Retrain teachers to fill teaching positions which are empty because of special knowledge or credentialing requirements. The openings which exist for teachers in math, science, industrial and vocational courses, and programs for the disadvantaged, could be filled by present teachers if they were retrained or earned new credentials.

These suggestions have been made as ways to increase the total number of positions for teachers within the school system:

—Lower the pupil-teacher ratio to ease the burden on classroom teachers and increase the quality of their teaching. The NEA has suggested that 24 elementary pupils per classroom teacher and a total teaching load of 124 secondary pupils per teacher would alleviate the teacher surplus until 1974. Even lower ratios have been suggested, of 19 to 1 for elementary and 99 to 1 for secondary, to handle the problem until 1978.

—Increase the number of students. This could be done in several ways. The entry age for school admission could be lowered to age 2 or 3. Special programs for adults seeking retraining, or for persons over 65 could be developed. Full enrollment of all school-aged students could be more rigorously enforced.

—Create specialized classes for the handicapped or otherwise exceptional child who is not now reached, or who is not served by the present educational system as intensely as required for development.

—Restrict jobs within schools to teachers. This could be accomplished by requiring certification for all teaching jobs that might otherwise be filled by non-certified paraprofessionals, and by requiring certification for non-teaching jobs such as school nurse and librarian as well.

To decrease the number of people who are able to seek teaching jobs and to "weed out" some of the personnel now employed, the following suggestions have been made:

—Discharge the teachers who are not fully certified to teach. Do away with provisional certificates and other devices whereby people lacking teacher training can get jobs as teachers.

—Increase qualifications and requirements for teacher hiring. This has already been done by 65 per cent of the school administrators surveyed by the editors of *Nation's Schools*. Fifty-seven per cent claim they will stiffen requirements still further in the future.

—Increase qualifications and requirements for entry into teachers colleges. This is expected to improve the quality of teachers while reducing their numbers.

—Discourage teaching as a career choice by widely publicizing the surplus.

—Disqualify many certified teachers by making their credentials obsolete. Decrease the jobs for which normal certification is enough, and increase the number of jobs for which specialized credentials are required.

—Enlist early retirement programs to make room for new teachers by removing old teachers.

—Send teachers overseas to satisfy the demand in foreign countries.

The proposed remedies carry a potential for controversy largely because they are frequently suggested in the spirit of the power struggle between teachers and other interests in the educational

establishment. Further, efforts to regulate teacher supply against demand have inappropriately borrowed models which are useful in other fields. Car manufacturers schedule production to meet demand. Producers of cattle and grain make every attempt to program production in terms of future demand schedules. But, for solving the problems of teacher supply and demand, these models contain fundamental flaws.

## FLAWS IN ATTEMPTS TO REGULATE TEACHER SUPPLY AND DEMAND

The demand for teachers in the present schooling system is a function of enrollment; enrollment, in turn, is a function of population. The population of school age children fluctuates. War-time baby booms, hard times, affluence, create waves in the population. These waves are not confined to those spans of time in which they first occur; they echo, creating population waves in subsequent years. The teaching life of a teacher lasts through a number of population waves that affect school enrollment. More teachers are needed some years or some decades than others. There is no way, however, of putting this decade's unneeded teachers into the deepfreeze until they are needed again in 1990 to teach the projected increased number of children.

The use of supply and demand models implies that teachers are single purpose tools, able to perform the job for which they have been programmed and willing to be put into service upon demand. This view depersonalizes teachers.

Although teachers are seen as intellectuals, they are perceived to be trainable to do professional work of only a simple sort, and only in a controlled system. Their value is seen as limited by virtue of their training, mental capacity, and experience. The restrictions imposed by credentialing requirements imply that teachers have limited capacity to learn and to utilize knowledge effectively, even within the controlled school setting. When jobs in schools are filled, the question of alternative employment options is sometimes posed as a problem in how to dispose of the excess teacher supply. Ways are devised to deal with the excess by reprocessing, repackaging, and delivering teachers for consumption elsewhere, as though they are a consumer item. It is time to examine these perceptions of teachers, and ask to what extent teacher training

programs and credentialing practices are geared to such perceptions.

Another flaw in the use of supply and demand models is the assumption that the school system will persist in its present form, and that the school's relationship with other societal institutions will remain unchanged. This is a very serious flaw, indeed. The school, as a societal institution, is in a state of crisis. While we can predict that children and young people will continue to be taught, it is folly to predict that the teaching will continue to be done in classrooms with a teacher standing in front of 19 to 34 students. To plan for a supply of teachers and for teacher education, it is essential to examine the crisis in the school establishment.

# II. A LOOK AT THE SCHOOL—AN INSTITUTION UNDERGOING STRUCTURAL AND FUNCTIONAL CHANGE

**Is the school likely to persist in its present form? How are schools of the future envisioned? Is it practical to plan for a supply of people to occupy the role of "teacher" in schools?**

## EVIDENCE OF CHANGE

The evidence that schools are in serious trouble is extensive. There is, of course, the usual controversy over educational policy and philosophy. It seems foolhardy to predict that schools will persist in their present form: there is a financing crisis; attacks on compulsory education are increasing; and, the demand for accountability has resulted in an outpouring of criticism regarding the performance of schools.

## FINANCIAL CRISIS

The golden age of the sixties, when societal resources poured almost without question into schools, is over. Taxpayers around the nation vote down school bond and tax proposals with increasing regularity. Educational costs have become a major national expenditure. During the school year 1971–1972, the people of the United States spent $85.1 billion on elementary, secondary and higher education.[1] The cost for public school education increased from $471 per pupil in 1960 to $959 per pupil in 1970.[2] While enrollment in elementary and secondary schools rose 19 per cent in the last decade, expenditures rose 159 per cent.[3] Education has become enormously costly. People are beginning to ask whether they're getting their money's worth. One critic (Drucker, 1968–69) charges that schools are now where farming was in 1750, that there has been very little change in technology in most classrooms since the invention of the printing press. As the costs of education

skyrocket, the demand for better technology becomes more insistent, to enable fewer people to do a much better job.

Not only are costs of education being analyzed in terms of benefits, but the method of financing education is also in the process of change. In August of 1971, the Supreme Court of California decided that the state's system of financing public education, by which each community largely supports its own schools through taxation of local property, was discriminatory. It was judged that equal protection of the law is denied when the quality of a child's education depends on the wealth of the district he lives in.

If the California case and other similar cases in other states are instrumental in changing the law of the land, each state legislature will have to retool the traditional mechanisms for financing schools. In addition, disparities among states will need to be dealt with. New York spends $1,237 for each pupil on the average, while Alabama spends $438.[4] Only federal aid appears as a way to provide financial equality among states.

The financial crisis and the need to retool financing mechanisms create tremendous vulnerability of schools to radical change.

## ATTACKS ON COMPULSORY EDUCATION

Certain groups have a history of fighting compulsory education laws, insisting that they have the right to make their own decisions regarding the education of their children. In a recent case, Amish parents were convicted of disobeying compulsory education laws. They appealed to the Wisconsin Supreme Court, which reversed the convictions. The Court exempted Amish children above the eighth grade from the compulsory law because their attendance in school violates religious prohibitions of the Amish. While the decision was based on the right to religious freedom, the decision, which has since been upheld in the United States Supreme Court, has broader significance. As viewed by one observer (Arons, 1972), the contest was in fact between Amish values and methods of child-rearing and those prescribed by the state.

The decision, upholding the rights of the Amish, has set a precedent for other groups who are critical of the schools. Increasingly, other groups are vocalizing their criticisms. Many have acted to provide alternative educational opportunities in the form of

schools without walls, community schools, Montessori schools, free schools, ghetto schools, some of which bear faint resemblance to traditional schools. Still, the law has required that students remain in some sort of school until the legal leaving age. This requirement, according to deschoolers such as Ivan Illich (1971b), violates the constitutional right to free assembly. Freedom of assembly is denied to students who are forced to assemble in schools.

The enemies of compulsory education are increasing. Students complain that schools are like prisons, where people are confined, immobilized, and dehumanized. "Although schools are often criticized," David Swift observes in *The Educational Forum*, "they are generally regarded as altruistic. . . . Many people would object to locking children up in prison for several hours a day but compulsory attendance in something called a "school" brings forth less opposition" (Swift, 1972, pp. 207, 208).

The opposition appears to be mounting. There is considerable adult concern about compulsory education, particularly of adolescents in large high schools. It is difficult to control thousands of young people, forcibly assembled under one roof, for days and years on end. Armed police have been added to school payrolls in many cities and suburban schools, to keep things under control. Schools are beginning to look like prisons in some areas, and this is unacceptable to many Americans.

"There is no justification in either psychology or biology for requiring the same minimum leaving age for all children," Musgrove (1964, p. 155) has asserted. James Coleman, the principle author of The Coleman Report, *Equality of Educational Opportunity*, has insisted that the minimum wage laws and union barriers imposed against the young must be relaxed (Coleman, 1972). Schools have accepted large numbers of children and have attempted to control them without providing opportunities for action and productivity. Students in today's schools, Drucker (1968–69) charges, cannot perform, they can only show promise, but they need a sense of achievement in growing up which only performance can give.

If compulsory education laws are modified as seems inevitable, schools will no longer have a monopoly on education. It is quite possible that the teaching of youngsters will shift, at least in part,

from classrooms to many other settings, and that teaching functions will be shared by many people who are not known primarily as "teachers."

## THE DEMAND FOR ACCOUNTABILITY

Schools, like so many other institutions in America today, are being called to accountability. Accountability requires the asking of basic questions. What is the school supposed to do? Who decides, and to whom is the school accountable?

Kenneth Clark (1968) has charged that public school inefficiency has reached a stage of public calamity, victimizing minority group children and also privileged white children. There is widespread agreement that schools are not performing adequately. However, there is a difference of opinion about what schools are supposed to be doing. Over the years, schools have been delegated an array of functions. Controversy is rampant surrounding the following four main functions of schools:

—Custodial care
—Shaping, or value formation
—Selection for social roles and social status
—Cognitive education

Critics are beginning to ask, not only whether the schools are performing their functions adequately, but also whether schools *can* perform such diverse, possibly antagonistic functions. Others are asking whether schools *should* be delegated so many functions and accorded the power to exercise such all-pervasive force on the lives of students. Some critics are proposing that new institutions be created to perform some of these functions, charging that it is the institutional union of so many functions which oppresses and victimizes students. To anticipate the future of schools, and the role of teachers in educating the young, it is useful to examine some of the controversy surrounding these four functions of schools.

## CUSTODIAL CARE

Critics are asking whether the custodial aspect of schools is meant to benefit parents, labor groups seeking to restrict their numbers, merchants, neighbors, employers, students—or whom?

Philip Jackson, director of the Laboratory School at the University of Chicago, has observed that "even if educators or their critics wanted to set children free to learn on their own without the confines of a school and all the restrictions it implies, there is ample reason to believe that parents and other adults in our society would not stand for it. Like it or not, our schools presently perform a custodial function as well as an educational one" (Jackson, 1971, p. 64).

The custodial care provided is seen to serve adults. Critics are asking whether it serves students as well. Students are described as apathetic, alienated, bored, immature, lazy, maladjusted. A study of the available data on the prevalence of maladjustment (Glidewell and Swallow, 1968) indicated that 30 per cent of the children in elementary schools showed at least sub-clinical problems of adjustment. Teachers reported a large increase in clinical maladjustment between kindergarten, where children typically are free to move and ineract, and first grade where interaction typically is suppressed and children are immobilized.

School is considered by many a hostile rather than a protective environment. Jonathan Kozol, in his book *Death At An Early Age*, described the violence and personal destruction that can go on inside schools. Schools at all levels are accused of being centers for drug trafficking. The custodial care provided by schools is criticized both for not providing protection against harm and violence, and also for providing protection of the wrong kind—insulation and isolation from the realities of life and from the feedback essential to learning.

Although schools are criticized for their performance of the custodial function, there is ample evidence that custodial care of children is a societal need which is not being met adequately by any existing institution. The Report of the Commission on Population Growth and The American Future makes clear the urgency of custodial care.[5]

According to the Commission's report, 43 per cent of all women are in the work force. In 1971, an amazing 44 per cent of working women were the sole support of a family. There are 12 million women in the labor force who have children under 18, and 5.8 million children under six years of age whose mothers work at

least part time. Child care arrangements are all too often inadequate or absent. At least one million young Americans receive no supervision at all. The Commission denounced these conditions as unacceptable. Custodial care of the young is a pressing societal need. It is uncertain the extent to which schools of the future will be delegated this function.

## SHAPING, VALUE FORMATION

Adults responsible for children are participants in cultures; they have values and expectations, and pictures of what children should look like when they grow up. Schools have been accused of holding up only one picture, and not a very good one at that. Drucker (1968–69) accuses the schools of training everyone for the job of medieval scribe. Kozol (1967) has protested the emphasis on obedience characteristics and the lack of any values having to do with an original child or independent style. Silberman (1970) has charged that schools educate for docility. Schools are accused of preparing children for membership in the silent majority at a time when silent acquiescence is decreasingly valued.

Not only are new pictures of future adults being painted, but persons and groups are insisting on their right to paint their own pictures. Blacks, Puerto Ricans, Chicanos and Indians have become increasingly vocal in rejecting value impositions. Some groups are demanding local control of their schools. Racial and ethnic groups are organizing to assert their right to preserve their cultural values and cultural identity.

Cultural invaders, Paulo Freire charges, "penetrate the cultural context of another group, in disrespect of the latter's potentialities; they impose their own view of the world upon those they invade and inhibit the creativity of the invaded by curbing their expression. . . . The invaders mold; those they invade are molded" (Freire, 1971, p. 150). But this is no longer to be allowed. The fundamental theme of this epoch, Freire observes, is domination versus liberation. This theme, with variations, is being played by liberation groups all over the world.

The demand for human liberation, and America's desire to respond, have led into territories of participatory democracy which are largely uncharted. Schools are deeply involved with liberation and have been delegated the task of providing equal opportunity

to all children. To help accomplish this task, schools have been ordered to desegregate. Yet, in the attempt to liberate and grant equality, the government is seen as imposing plans on communities, disallowing community control, dominating rather than liberating. Small wonder that the school has become a battleground, as diverse groups demand the right to both possess and impose their sets of values.

## SELECTION FOR SOCIAL ROLES AND SOCIAL STATUS

Critics of schools are becoming increasingly dissatisfied with the selection and sorting function of schools. Friedenberg (1968) charges that schools are screening mechanisms which act to perpetuate the existing systems of social stratification and prestige, and as such, are predisposed to undermine educational values of creative change, growth, and innovation. The credential, he charges, tells us that the bearer possesses the "trained incapacity" required to assure that he will respect the conventional limits of the role made available by the credential. To permit the members of a profession to make full use of their technical powers would spoil the existing fit among the various roles in society. People who might upset the status quo cannot be allowed in, and the school, as handmaiden of the established powers, is asked to restrict entry.

Schools, in recent years, have held out the promise that education will serve as an antidote to poverty. Edmund Gordon (1970) has questioned the morality of that promise, asking whether competency is in fact as important as the entry credential; persons who develop skills but don't have the entry credential find that they are misled by their belief in education. Clark (1968) asserts that the present system of urban public schools is a primary obstacle to the mobility of minority group children. Even the Head Start program has been attacked (Pearl, 1970) as a game, the point of which is to score by insulting the opponent's mother. The poor child, entering the Head Start program, is informed in a variety of ways that he has a "lousy mother."

Critics charge that schools, in tracking youngsters, are characteristically hostile to poor youth. Pearl (1970) observes that on the basis of tests constructed and administered by psychologists, disadvantaged youths are identified, and then shunted out of main-

stream education. They are assigned to special classes, and then left to flounder, firmly locked into poverty. The teacher has no legitimate function in a class surrounded by students all stamped as losers. The main reason poverty is maintained, Pearl charges, is that we have evolved into a credentialed society. Drucker (1968–69) also expresses concern that the "diploma curtain" might cut American society in two. He predicts that in ten years or so, somebody will make a proposal to ban on applications all questions related to educational status, as well as race and religion; schools would thus be relieved of the requirement and power to sort out candidates for employment and for social and status roles.

Large credibility gaps have arisen about the validity and predictive value of test scores, grades, and credentials. It has been assumed that success in school is significantly related to later success. However, a review of the literature concerned with the relationship between grades and later success of practicing professionals revealed very little association between the two (Schiff, 1970). If grades and test scores do not predict performance, their use is difficult to justify, except as a way to stratify and restrict mobility. To many people, this is an inappropriate function for schools, and an unacceptable type of power to be delegated to any institution.

## COGNITIVE EDUCATION

Cognitive education has been considered by many people to be the primary function of schools. In recent years, understandings of cognitive development and learning processes have been changing radically. With the changed understanding, a monumental credibility gap has arisen regarding the school's ability to achieve its cognitive goals within present school structure and organization.

It was assumed in the past that development was predetermined, and that intelligence was fixed by heredity (Hunt, 1970). A child's learning capacity was set. It was further assumed that learning was a passive, receptive process. To the extent that his learning capacity permitted, a child was thought to learn by passively receiving knowledge poured into him by his teachers through lectures and exhortations.

Psychologists and educators no longer accept such a model of the teaching-learning process. Learners are described as open, active, and self-regulating systems. Yet, schools and classrooms continue to be organized and structured around the old model. Students are required to passively sit, listen, absorb knowledge, and respond as directed by the teacher. Students in traditional classrooms are not free to move about, act, exercise choice. Research has been reported (Peck, 1971) which shows that teachers talk between 65 and 75 per cent of the time. When students do talk, it is primarily to recall data in response to a teacher's question. Contemporary practice, it has been charged, "seems largely to treat students as passive, teacher-controlled units in an almost faceless mob." Further, there is extremely little provision in our schools for the development of *individual initiative* in any way that could lead to wisely self-disciplined action, when the chance for independent action ultimately does arise" (Peck, 1971, p. 84).

With increased understanding of cognitive processes, scientists are admitting that the knowledge we have is still limited and fragmentary. Efforts to correlate learning achievement with schooling factors have produced surprising results. The Coleman Report (Coleman, et al, 1966) indicated that there was no particular school characteristic that had measurable positive impact on student achievement. A direct relation can no longer be assumed between student achievement as measured by standardized tests, and resources such as new buildings, materials, expensive equipment, and pupil-teacher ratios. Two student attitudes, however, showed a high relation to achievement: a positive self-concept and a sense of control over the environment.

Christopher Jencks (1972) has pointed out that the students who performed best on the achievement tests were often enrolled in the same schools as those who performed worst. A primary problem is the disparity, not among schools, but between the top and the bottom of the classes within a school. The relation of such disparity to school practices such as grading and tracking, and to subtle factors such as teacher expectations, value congruences between school and student, linking networks, etc., still needs to be determined. Educational research is called for, but as Moynihan has observed, research is frequently threatening, for

it produces unsettling information. "I for one would be willing to bet that the more we learn about formal schooling the less we will come to value it" (Moynihan, 1972, p. 24E).

## VISIONS OF THE FUTURE SHAPE OF SCHOOLS

Critics agree that the schools of the future will look quite different from those today. Their shape is unclear, however; possibly there are as many visions of future schools as there are visionaries. Specific suggestions for change include the following, which indicate the range of views.

**—Schools should concentrate on teaching and be relieved of all other functions.**

Many critics propose that schools should concentrate on cognitive education, and turn over the rest of their functions to other institutions. One critic (Bereiter, 1971) has proposed that the school should be restricted to teaching only those skills which are clearly teachable; the money saved could be used to provide cultural resources, open to everyone without the burden of educational intent.

**—Schools should be relieved of teaching functions.**

Coleman (1972) has proposed that traditional teaching activities should move out of schools, into the competitive arena where technology is properly used. Skill-specific vouchers could be paid to any approved agency teaching the skill. The school, then, is free to assume other functions.

**—Schools should integrate the young into the community.**

The new goal of schools, according to Coleman (1972) must be to integrate the young into functional community roles that move them into adulthood. One way he suggests this be done is to reorganize the school into productive communities in which the young would carry out responsible activities in service to the larger community. Many behavioral scientists and educators join Coleman in enunciating the value of activity and productivity in human development and learning. Bruner (1970) observes that even a supporting, loving atmosphere, with nothing else to do, doesn't encourage the kind of activity kids grow on. Gordon (1970) asserts that there is something about producing and being an active part of a process that develops people. Bennis (1970) states that he is about convinced that it is necessary to produce some-

thing in any organization, or it becomes inward and fails to earn the respect of other groups and communities. Ford (1969) observes that work is the fundamental motivation, though we do not adequately understand its great value to humans. The classroom which is open, extending into the community and the community into it, is suggested as a way to enable students to be productive, and to enable the community to participate in education.

**—Schools should focus on identity-building and personality integration of students.**

A task of every young person is to develop his own identity (Erikson, 1968). Some critics believe that schools should place more emphasis on identity formation and personality integration. Friedenberg (1959) proposes that a primary function of the school should be the clarification of experience, essential for self-definition. Thelen (1972) considers ways in which teachers can organize classrooms and learning activities so that opportunities are provided for students to integrate thought, feeling and action. Clinard (1970) discusses the process of identity change, not only of individuals but also of groups held in low esteem. Most of the alternative schools organized by minority groups have aimed to develop positive group identities, as well as positive individual identities.

**—Deschool society.**

Ivan Illich, a leader of the deschooling movement, defines deschooling as abolishing the power of one person to compel another person to attend a meeting, and recognizing the right of any person, of any age or sex, to call a meeting. Illich (1971a) proposes a new style of educational relationship between people and their environment. Learners would be provided with new links to the world; educational programs would not be funneled so exclusively through teachers. Illich suggests that learners have two needs. First, they need access to information, which can be acquired from materials and from people. Second, they need critical response to the use of information, which can be given by peers and elders. To provide for these educational needs, Illich proposes that four networks be created. The first would provide access to educational materials of all types, both those reserved for educational purposes and those used daily in workplaces but

made available for educational purposes during certain hours. A second network would be a skill exchange; it would permit persons to list skills and the conditions under which they are willing to teach others. A third network would provide peer matching; it would enable a person to find a partner for inquiry, in the community or outside the community. A fourth network would provide a reference service to educators-at-large, who, among other things, could guide people in the use of the networks. Under Illich's scheme, "student discipline, public relations, hiring, supervising, and firing teachers would have neither place nor counterpart . . . (Illich, 1971a, p. 54). Illich's proposal requires vast improvements in educational technology and communications systems; it relies heavily on shifting the instructional load from teachers to materials including tapes, films, and the equipment now locked up in workplaces. The use of technology is seen by Reimer and Illich (1971) as one way to reduce the expense of education so that universal education can be a reality in all nations of the world.

A variation of deschooling has been proposed by Paul Goodman. Goodman (1971) suggests that mini-schools for children from ages 6 to 11 be organized. The schools would consist of about 28 children, and 4 teachers, only one of whom is certified. This group would use rooms in existing buildings and utilize community resources while taking part in community activities. Learning would be largely incidental, rather than deliberate and sequentially organized. The chief occupation of educators would be to see that the activities of society provide incidental education, rather than exploitation and neglect. Beyond age 11, young people would begin to do something for which they have developed a competence, and seize opportunities as they arise. To insure freedom of option and protection from exploitation, Goodman proposes that all adolescents be guaranteed a living.

Another form of deschooling has occurred in communes where children learn, not in schools, but by watching adults and participating in on-going communal life (Poppy, 1972). Modification of workplaces in mainstream society to incorporate the young has been proposed (Coleman, 1972) as a possible way that education might be reorganized.

Deschoolers are concerned with the social control which has been accorded schools and educators. While some critics, like

Musgrove (1965), propose that the 12 or 13-year old who is in part-time work would still be the responsibility of local educational authorities, Illich, Goodman, and Bereiter want to minimize the authority of the pedagogue, both inside and outside schools. Ohlinger (1971) shares their concern, indicating that educational change might lead in either of two directions: toward total manipulation, with valuable knowledge considered a commodity which may be forced onto the consumer by totalitarian managers of information; or, towards self-directed learning in a society where meaningful choices are possible. Educators, Ohlinger suggests, can affect the direction; they can nurture choice, or they can become the lackeys of the "therapeutic Big Brother."

**—Schools should focus on liberation of human potential.**

Observers note that schoolers see a different child than deschoolers. Schoolers see a child who must be forced to learn, while deschoolers see a child eager to learn if permitted. The question is, which child do we now have entering our schools? Many children, Etzioni (1971) proposes, bring with them to school the distortions from their non-liberated backgrounds. These distortions, Etzioni asserts, require a teacher and a school which can motivate, plan and guide. Children need to be awakened from their "TV-induced, parent-supported slumber" (p. 96). Deschoolers "assume that children are already liberated, while in fact they must yet be set free" (p. 97). Maxine Greene (1971) similarly proposes that the dehumanizing forces presently loose in the culture can be combated only by international action on the part of those committed to education. Paulo Freire (1971) speaks of the "new man" yet to be born through a truly liberating education which awakens critical consciousness.

**—Schools should focus on social and cultural development.**

Boulding (1964) points out that cultural change and development usually have come about as a result of the interaction of cultures which previously developed in isolation. With modern technology and communications systems, he believes that preserving enough differentiation of human culture to prevent the universal spread of a drab uniformity will become a pressing problem. He notes that the trend towards decentralization suggests that the human species might—consciously or unconsciously—be working

in its best interests to preserve local color and differences. The separation of some groups, he suggests, might be seen as adaptive for the species on a long-term basis.

Diversity and heterogeneity are increasingly seen as social values, necessary for continued cultural development. This view is given support by genetic studies which have discovered unexpected genetic variability in a number of species, including man. One scientist has suggested that we may need to cherish genetic variations between individuals and that "we may need to regard a high level of heterogeneity as adaptively significant" (Ravin, 1972, p. 15). Such observations reinforce the reasoning of many local groups who wish to establish their own schools, and preserve and develop their own identity, before participating in the larger community.

## CURRENT INNOVATIONS

Proposals for reform have brought action; experiments are occurring all over the nation. According to Allen Graubard, more than 600 small "outside-the-system" schools have been founded in the last several years. In addition, many public schools have tried new formats. Some of the innovations of recent years that have been identified and described by observers (Krug, 1972) (Von Haden and King, 1971) include: individualized instruction; multimedia centers; non-graded schools; community schools; Montessori method; programmed learning; computer-assisted instruction; performance contracting; voucher system; flexible scheduling; team teaching; teacher aides; differentiated staffing; interaction analysis; microteaching; simulation; sensitivity training; mass media models. In addition, the idea that children and young people, of all ages, can function effectively as tutors has received considerable attention (Thelen, 1968).

## PROBLEMS OF PREDICTING TEACHER DEMAND

Examination of the crises in education indicates that, whatever else might be said, educational institutions and roles in the future will be different from present forms and definitions. The breaking down of barriers between school and community, and between education and work and leisure, suggests that teachers in the near future will need to frequently function in settings other than schools. Further, it appears that continuing education throughout

adulthood will become the norm, instead of extending the years of education into a prolonged adolescence prior to entering the world of work and adulthood.

Thus, to anticipate future demands for teachers, it is necessary to look beyond schools, at other societal institutions and societal trends.

# III. A LOOK AT SOCIETY: MAJOR TRENDS AND EDUCATIONAL IMPLICATIONS

**What are the major societal trends which affect schools and education? What kinds of teaching are going on outside the formal educational structure? How do societal learning needs relate to the question of teacher supply and demand?**

## SOCIETAL CHANGES AND TRENDS

A look at society reveals a number of fundamental changes relevant to educational needs in the future. Changes which will be discussed relate to the knowledge explosion; the obsolescence of traditional institutions; the new pluralism of organizations; knowledge utilization; priorities and values; and new ways of organizing for work.

## KNOWLEDGE EXPLOSION

The store of human knowledge has been accumulating at increasingly accelerated rates, paving the way for what Kenneth Boulding (1964) has called the second great societal transition, from civilized society to postcivilized society. The first transition, from precivilized to civilized society, was made possible by agriculture. Now, agriculture has progressed to the point where 90 per cent of the population has been released to work on things other than subsistence.

The transition into postcivilized, post-industrial society is "identified primarily with changes in the state of human knowledge, involving therefore a learning process" (Boulding, p. 27).

The change in the state of human knowledge is reflected by our rapid movement into a knowledge economy resting on science, and increasingly on the social and biological sciences. There

has been a dramatic growth of "knowledge industries" in recent years. Knowledge industries, which produce and distribute ideas and information rather than goods and services, accounted for one-quarter of the U.S. gross national product in 1955, and one-third of a much larger gross national product in 1965 (Drucker, p. 263). By the late 1970's, Drucker predicts that knowledge industries will account for one-half of the total national product.

## OBSOLESCENCE OF TRADITIONAL INSTITUTIONS

The inventions of industrial society, Wheeler (1972) observes, were products that extended the capacity of the body. They could be mass-produced, and individually purchased and used.

Two characteristic organizations were created by industrialism: the factory, which processed materials; and the bureaucracy, which processed records. Industrial society was dominated by the logic of processing machines. To receive the benefits of mass-production, man was required to adapt to the needs of the machine. His economic, social and political institutions reflected that requirement.

The characteristic inventions of post-industrial society, Wheeler observes, are not of products for mass production. Modern inventions are systemic. Thermonuclear energy, the computer, artificial synthesis of life, behavior modification through the conscious redesign of society, are inventions in the areas of energy, thought, life, and community which directly influence everyone in the society whether they like it or not. Individual choice in the acceptance, rejection and utilization of systemic inventions is impossible.

Our capacity for dealing with systemic innovations, Wheeler observes, is totally inadequate. We have yet to learn how to allow for deliberation about innovations of this order. The economic, social and political institutions of the Industrial Revolution are inadequate for today's needs. Suitable institutions need to be created or restructured, dominated not by the logic of the processing machine, but reflecting a "more universal, biologically oriented, ecological and homeostatic ethic" (Wheeler, p. 55).

## THE NEW PLURALISM

Industrial society was characterized by paternalistic institutions, which often served to humanize the cold logic of the processing machine. Paternalistic institutions expressed concern about members, and sought to influence all aspects of their lives.

Today, the paternalistic institution is dying out. What has emerged in this half-century, Drucker (1968–69) notes, is a new pluralism of special-purpose institutions. None can be defined territorially; each is universal, yet limited to a small fragment of human existence. Each institution, whether government, business, labor union, university, hospital, is responsible for one set of social tasks. Persons today relate, not to one paternalistic institution which discharges all these tasks, but to many institutions, each with its specific and limited function. For a pluralistic society to function effectively, each institution must discharge its one set of tasks competently without attempting to usurp power or to exercise unwarranted control over the lives of people.

The new pluralistic structure of society, Drucker observes, is not well understood. Traditional theory is inadequate to offer much guidance in dealing with new problems revolving around accountability, the legitimacy of authority, interdependence of institutions, morale and order. Modern organizations must give their members status and function, but even more importantly "must satisfy people outside, must serve a purpose outside, must achieve results outside" (p. 210). They are expected to perform; performance is the reason for their existence, and the only reason that they are accorded power and authority. This means, Drucker continues, that we need to know what performance means for any given institution. Better measures of performance are needed in many cases, e.g., for health care, education, governmental services.

Totalitarianism is a modern threat. It is a tyranny which aims at the total control of society. Pluralism, on the other hand, guarantees freedom from domination by any single group. To safeguard the freedom guaranteed by pluralism, it is essential, Drucker insists, to "confine each institution to its task and mission." Any attempt on the part of an institution to claim responsibility beyond its own sphere should be considered usurpation even though well-intended; it is a "threat to freedom," and "incom-

patible with a free society" (Drucker, p. 250). It is necessary, Bennis (1970) asserts, that men and women today in all walks of life recognize their moral, ethical and emotional involvement in human institutions. The alternative is to create a society of Eichmanns, people who simply do what they're told.

## KNOWLEDGE UTILIZATION

The world is faced with conditions which threaten global survival. Problems of war, pollution, population, poverty, justice, human relationships, are increasingly difficult to ignore. Everyone is affected by these problems, although no one seems to know how to solve them. History reminds us that Rome burned while Nero fiddled; fiddling strikes us as inadequate. An urgent need is seen to systematically utilize knowledge to solve our pressing problems.

American professors, Bennis (1965) observes, have left the university and are working in factories, the government, in underdeveloped countries, in hospitals, in educational systems. They are counseling, researching, training, recruiting, and developing. Universities have established research centers and departments dealing with knowledge utilization and planned social change. Knowledge has come out of the ivory towers; it has lost its innocence as it has become connected with action and results and is subject to judgment.

Systematic knowledge utilization is a relatively new effort; it is still more a hope than a reality. Considerable research is being focused on the study of social systems and social processes. Action research is focusing on the integration of science and practice (Bennis, et al 1969).

## PRIORITIES AND VALUES

Priorities and values are critical issues in knowledge utilization. Values are changing, perhaps because of the systemic nature of modern innovation. Self-interest is increasingly identified with the common interest; cooperation rather than competition is valued as the working mode most likely to achieve desirable results.

The value of obedience has also become suspect. Increasingly, since the Nuremberg trials, persons are being held individually accountable in and out of courts. This shift is apparent in a new version of an old sign. We were told in the past "What is worth

doing is worth doing well." Now, we are warned "What is not worth doing is not worth doing well." The new sign demands that value judgments be made, not just once by an authority, but continuously by every worker. Individuals are increasingly expected to evaluate the legitimacy of authority, and to accept responsibility for their own performance, values, and goals.

Emotions and feelings, long suppressed by the logic of the processing machine, are being legitimated. Not only are feelings legitimate, they are perceived as essential in determining priorities and assessing accountability. Persons who utilize knowledge to effect social change see their role as not only diagnosing ongoing events in which they are involved; they must also "find ways to intervene in these events to maximize the valid human values implicit in the events" (Benne, et al, 1961, p. 114, Second Ed.).

**ORGANIZING FOR WORK**

New forms of organizing for work are being developed, which reflect the attempts of organizations in a pluralistic society to utilize knowledge and perform responsibly.

Work is increasingly organized around a specific problem to be solved and task to be performed. Results depend on the coordinated efforts of a number of persons with different competencies who may be relative strangers, together temporarily for work on a task. When the work is completed, the task group is dissolved. New tasks are defined, and working groups reorganized. Value-oriented input from many persons is necessary to define tasks and set goals; no one person can decide alone what societal needs are significant and what problems have priorities. Further, after the task is completed, a variety of input is needed to assess results and determine accountability.

New kinds of organizational structures which are fluid and free-form are associated with task groups. Bennis (1970) speaks of the organic organization, small and possibly temporary, growing out of the human environment and centered on the persons who develop them. Or, the organization may be permanent and possibly quite large; however, the large organization serves as an umbrella for federations of adaptive, rapidly changing temporary systems organized around tasks. Drucker (1968–69) uses the term "innovative organization" to describe structures which convert ideas

into purposeful action, not just once but continuously. Innovative organizations require a different form of management than the traditional entrepreneurial organization. In the past, an entrepreneur created a business which he himself could command, defining tasks, and training and managing employees to perform them. The innovative organization, however, requires not command but team structure, "largely unknown to classical organization theory—though a jazz combo . . . exemplifies it" (Drucker, p. 56).

The management of team organizations is a new field. Behavioral scientists agree that much is unknown. The social and psychological needs of knowledge workers are not understood. The traditional motivators, the external rewards, do not motivate. Dissatisfaction with external rewards destroys motivation, but satisfaction with them is taken for granted. Knowledge workers in team organizations are not hired to do repetitive tasks; they are hired to think, feel, use knowledge, perform.

Yet, Drucker proposes, the knowledge worker is not the successor to the independent professional of the past, but to the skilled and unskilled worker of yesterday. He senses a hidden conflict between the knowledge worker's view of himself as an independent professional, and the reality of his position, within an organization. This conflict between expectations of personal autonomy and the reality of team organization adds another dimension to the problem of managing knowledge workers for productivity. Young people, Drucker suggests, need systematic information on organizations, to learn how to make an organization serve their own purposes, values, and aspirations, in producing the results needed by society.

## TEACHING OUTSIDE THE FORMAL EDUCATIONAL STRUCTURE

A look at societal changes and trends reveals that knowledge is of central importance in organizations of all types. This fact is reflected by the growth in educational efforts outside the formal educational structure.

## DRAMATIC GROWTH

It has been estimated (Cohen, 1969) that 18.9 million persons were engaged in vocational, technical and professional training outside the formal education structure in 1960; by 1970, the number had risen to an estimated 48.7 million. Of the 48.7 million, rough estimates placed 18.1 million in professional and technical training institutes; 17.5 million in company schools; 6.0 million in on-the-job training; 3.2 million in correspondence schools; 3.0 million in the armed forces, and .9 million in other training programs. The continuing education of adults has become the fastest growing area of education, reflecting the expectation that updated knowledge will be applied to work.

An examination of specific programs reveals different types of teaching efforts, aimed at individual development, problem solving, improved performance, and organizational development. These include: vocational-technical training and retraining; socio-psychological training; work-study programs; T-Group training; and consulting for knowledge utilization and planned change.

## VOCATIONAL/TECHNICAL TRAINING AND RETRAINING

Many organizations regularly provide both introductory and continuing training for their employees. Technological change quickly obsoletes skills and creates a need for retraining, to update and upgrade skills, or to learn new ones entirely.

A number of special programs, private and governmental, have been established during the last decade to improve vocational and technical competence. Governmental programs include: The Manpower Development and Training Act; Neighborhood Youth Corps; Operation Mainstream; New Careers; Special Impact; JOBS Federally Financed; Concentrated Employment Program; Work Incentive Program. An example of a private program is JOBS, created after the Detroit riots in 1967 by the National Alliance of Businessmen. Under this program, business leaders assigned cooperating firms quotas of hard-core unemployed to be hired and trained on the job (Lawrie, 1969).

Vocational-technical training has been conducted by foremen, department supervisors, and by vocational-technical instructors in training programs and institutes.

## SOCIO/PSYCHOLOGICAL TRAINING

A number of training efforts have attempted to socialize trainees for entry into the world of work, teaching the work ethic and those behaviors considered essential for success. Some programs have coordinated skill training on the job with socio-psychological training directed by clinical psychologists in group training sessions (Lawrie, 1969).

## WORK/STUDY PROGRAMS

There has been increasing recognition of the relationship between motivation to learn, and actual pay-offs in the real world. Work-study programs of many types have been developed.

One type of work-study, exemplified by a government program called New Careers, is of particular interest and significance. New Careers is designed to provide unskilled persons with entry into human service work, a rapidly growing sector of the American economy. During this decade, the U.S. Department of Labor predicts that employment growth will be the greatest in agencies providing health, education, sanitation, welfare, and protective services such as crime and narcotics prevention.[1] The New Careers concept is that many of the human service tasks performed by highly trained professionals could, if broken down properly, be performed by inexperienced untrained people at much lower costs (Reissman, et al, 1970). Services could be provided more economically; at the same time, unskilled people could be given access to opportunity. Entry jobs are designed which can be performed by workers who are totally unskilled. Training, upgrading and additional education are built into the program. Career ladders lead to better jobs and to diplomas and full professional status if the employee so aspires.

A major obstacle to the development of large programs utilizing non-professionals, according to one authority (Reissman, 1970) is the scarcity of trainers and supervisors. Reissman estimates that if a million non-professionals were to be employed, at least 50,000 training and supervisory personnel would be required.

"It is clear," Reissman writes, "that while the New Careers movement may potentially reduce certain manpower shortages in the human service field, it is also developing new shortages of a specialized kind of manpower, namely, trainers" (p. 24). He cites

an urgent need for Senior Trainers, people capable of instructing the trainers. "Ultimately, Senior Trainers may be recruited from the ranks of trainers who in turn have been recruited from among noncredentialed personnel. . . . Initially, however, this is unlikely. The first group of Senior Trainers should have had considerable supervision-related experience either as social workers, educators, psychologists, home economists, nurses, etc." (p. 26).

New Careers is considered a viable program and has been called a political reality; funds have been made available through a variety of legislative efforts. "There is every reason to believe that government will continue to increase in importance in the utilization of manpower, particularly as machines engage in more and more production of goods and man is liberated to human-service activities" (Pearl, 1970, p. 362).

## T-GROUP TRAINING

A major educational effort in organizations of all kinds has been training designated variously as sensitivity training, group dynamics training, laboratory training, and T-group training. It has been estimated (Bennis, 1970) that persons with experience in sensitivity training rose from 2,000 in 1950 to 3 million in 1970.

The idea behind this type of training originated at the National Training Laboratories in Bethel, Maine, under the guidance of Leland Bradford, Kenneth Benne, and Ronald Lippitt. A number of university-based behavioral scientists have participated, facilitating the rapid growth of T-groups.

Early objectives of T-groups were personal change and self-insight. Since 1958, when the Esso Company inaugurated a series of T-groups at refineries over the country, the emphasis has shifted to organizational change (Bennis, 1965). T-group training has aimed to develop awareness of feelings and values. During the training, participants examine their interpersonal relationships and attempt to understand interactive processes and the dynamics of group behavior.

## CONSULTING FOR KNOWLEDGE UTILIZATION AND PLANNED CHANGE

Organizations with problems that need to be solved by applying

knowledge sometimes hire change agents to help effect planned change.

Planned change has been defined (Bennis, 1965) as a linkage between theory and practice, between knowledge and action. The process of planned change involves a change agent and a client system, who together attempt to apply valid knowledge to solve the client's problem.

Change agents, to date, have usually been professionals who hold doctorates in the behavioral sciences. However, in some instances, persons with other qualifications and perspectives have been sought. Paraprofessionals, for example, have been hired for the knowledge they possess and can impart to bridge the gap between service agencies and the communities they serve.

The demand for decentralization, for community control, and for accountability to those served, promises to enlarge the numbers and kinds of persons whose knowledge is perceived as valid, and who might perform teaching functions as change consultants and agents.

## IMPLICATIONS FOR TEACHER SUPPLY AND DEMAND

Our look at the changes occurring both in schools and in society reveals a number of trends relevant to teacher supply and demand.

—The world of work and the world of education are becoming increasingly interwoven.

—Continuing education, with frequent returns to school throughout adulthood, appears to be replacing extended education for the young.

—Considerable teaching is being done by persons not known primarily as teachers.

—The need for teaching is accelerating, reflecting the knowledge explosion and rapid technological and institutional changes.

—Teaching performance and accountability are being demanded.

—The need for new teaching skills and redefined educational roles is evident, both in and out of schools.

These trends strongly suggest that it is not realistic to plan for a supply of future "teachers," if by that we mean people who are trained and credentialed, once and for all, to assume that role. The role of "teacher," so defined and understood, is quickly being outmoded by rapid technological and institutional change, and by the growing demand for knowledge utilization and accountability to those served.

Thus, instead of asking "How do we meet the future demand for teachers?" it is more fruitful to ask "What future demands for teaching can be anticipated and how might those who teach be helped to meet these demands in a responsible manner?"

# IV. ANTICIPATING AND MEETING THE DEMANDS FOR TEACHING

**What will be demanded of teachers and of the teaching profession in the future, and how might these demands be met responsibly?**

## NEW DEMANDS ON INSTITUTIONS OF HIGHER EDUCATION

Criticism is being heaped upon colleges and universities, and special criticism is directed towards schools of education. It is widely charged that methods courses are irrelevant, that teacher preparation programs fail abysmally in teaching people how to teach, and that schools of education serve as recruiting and screening agencies instead of performing any real educational functions.

Institutions of higher education, like all others, are being called to accountability by the people served—their students and the public (Hart & Saylor, 1970). They are being asked by students and communities to assume a difficult task in relation to teachers. They are being asked to utilize knowledge to find new ways of helping teachers perform more effectively.

Several needs are immediately evident. On-going research will be required to determine societal needs and desires for learning, and thus, for teaching. Courses of study and bodies of knowledge must be continuously developed in response to the learning needs of teachers. Learning environments which are more effective and new educational structures and formats need to be created. Policies and structures are needed which permit and encourage the opportunity for teachers to learn additional knowledge and skills.

Changes in credentialing requirements and practices are overdue. The evidence suggests that present practices deny entry, impede personal growth, restrict movement, and require an unwarranted sameness. Credentials are frequently considered meaningless and are ignored, both in alternative schools and in teaching programs in workplaces. The demand is not for "teachers." The demand is for persons who can teach, for persons who can create learning environments, and for persons who in one way or another can contribute to the learning of others.

## TEACHING/LEARNING NEEDS IN THE FUTURE

Anticipating the teaching-learning needs of people in a society undergoing rapid change is a difficult task. The trends observed in the school and society have suggested a few, relating to: the development and supervision of work-study programs; new educational roles; understanding of the teaching-learning process; creation of alternative schools; changing skill requirements; the development and use of technology; accommodation of population waves; and, provision of equal opportunity.

## WORK/STUDY PROGRAMS

As school walls become more permeable, work-study programs for people of all ages promise to grow in number and type. Effective programs demand competence in the performance of a number of difficult tasks identified by Featherstone (1969): intelligently relate study to work; supervise students in work-study arrangements; screen candidates and match them to jobs; locate and negotiate with workplaces in which people can learn as they work; relate to many types of people and groups responsively and responsibly.

## NEW ROLES

Educational roles are being redefined, and new roles and functions are emerging. The types of knowledge and skill in demand are indicated by the variety of terms used to denote educational functions and roles, including the following: advocate; access person; counselor; community organizer; street worker; recruiter; diagnostician; evaluator; psychometrist; learning specialist; subject matter specialist; learning activities organizer; task organizer; interventionist; directress; linkage person; resource person; role

model; skill demonstrator; negotiator; media specialist; paraprofessional; monitor; trainer; socialization agent; educational technologist; group leader; learning center director; work-study supervisor; change agent; coordinator; community builder.

## THE TEACHING/LEARNING PROCESS

A criticism often directed at public school teachers is that although they know subject matter, they do not know how to teach. Knowledge of cognitive development, and of the social and psychological factors in learning is an area of vital importance to those who teach. An understanding of interactive processes and social systems is increasingly demanded. With the growing value placed on cultural pluralism, knowledge of culture and subcultures is frequently required, along with the ability to communicate in several languages.

Teaching has long been considered both a science, requiring scientific knowledge, and an art, developed through practice. There is an increasing demand for programs of study which help teachers integrate the science and art of teaching.

## ALTERNATIVE SCHOOLS

Small, alternative schools are being organized across the nation to provide educational choices. They are being organized as grass-roots creations, by teachers, parents and students (Graubard). Critics foresee the development of many more small, grass-roots schools, and teachers will no doubt continue to be central in their creation. Teachers who wish to be educational entrepreneurs have distinct learning requirements; they need to learn how to invent an educational system. Bennis (1970) has called on universities to help people learn how to invent such systems—small, temporary, and person-centered. From such systems it is expected that people will come who are able to build a new generation of institutions suitable to postcivilized society.

## NEW SKILLS

New teaching skills are in demand, in addition to traditional skills. One traditional form of teaching might be termed training; training occurs when learning is directed towards the performance

of defined tasks. Someone knows exactly how a task is to be performed, and can train another person to likewise perform that task. Another form of teaching might be termed education, which guides but cannot specify performance; rather, education has as its objective further learning. Education develops consciousness of knowledge gaps, of learning to be pursued. Sometimes, the knowledge to be pursued has not yet been learned, so it cannot be taught. Knowledge as yet unknown is frequently sought in innovative knowledge organizations, both to solve problems and to effectively organize and manage the work of many people so that responsible results are achieved. Within such structures, learning and teaching become intimately interwoven. Newer forms of teaching might be termed "input" and "feedback." People collaborate, and simultaneously learn and teach as new knowledge is acquired.

## TECHNOLOGY

Numerous observers anticipate the rapid development of educational technology. Persons will be needed who can create this technology, administer it, and counsel people in its use.

## POPULATION WAVES

Flexibility of teaching efforts will be needed to accommodate population waves. For example, during the decade of the 1970's, 35 million new workers will be seeking their first jobs,[1] a legacy of the baby boom which bulged the schools in the 1960's. Moynihan (1972) has observed that the transition we manage least well in our society is the one from school to work; yet, we have no institutions or only a few for managing this decade's increase. The management of this transition provides a need for new roles and structures.

## EQUAL OPPORTUNITY

While our nation is deeply concerned with the problem of equal opportunity, much work remains to be done. In 1970, 26 million Americans were living in poverty conditions.[2] With modern com-

munication technology, everyone knows how everyone else lives; people are increasingly aware of injustices and barriers to opportunity.

The utilization of knowledge to bring about the economic development of the poor and excluded is a new and compelling goal. It demands a vast educational effort, of the sort exemplified by New Careers which recognized the relationship between learning and actual pay-offs in the real world. The Coleman study of educational opportunity revealed inferior achievement of minority group students in schools across the country. Observers suggest that minority students who expect to benefit from learning have no difficulty learning; those who experience no benefits cease to learn. Gurin (1970) suggests that there is a need to focus on the problem of expectancy in training programs for the poor and excluded, and this need no doubt extends to the young. Expectancy training would include teaching about the way the social system operates; it would help judge what might realistically be expected in given situations. If expectancies are to be relearned and enlarged, expectancy training, Gurin asserts, needs to be tied to successful performance in work and community life. Equal opportunity in schools cannot be separated from equal opportunity in all of life.

These are some of the societal demands for learning and teaching. They present a real challenge to educational institutions charged with the responsibility of developing responsive programs, and making them easily available to those who seek additional knowledge.

# V. OBSTACLES AND OPPORTUNITIES

**What obstacles are teachers likely to encounter as they look for teaching work in settings other than schools? What opportunities does the present oversupply of teachers present for both teachers and employers?**

It has been noted that American professors have left the university and are working in factories, the government, in hospitals, in educational systems, in underdeveloped countries. They are researching, training, advising, counseling, recruiting, and developing.

There is little evidence that elementary and secondary teachers have likewise engaged in educational efforts outside the school setting. This is partly due to the fact that the demand for teachers in schools has been large until a year or so ago. However, there are other reasons as well, which are related to the fact that the majority of today's public school teachers are women.

## OBSTACLES ENCOUNTERED BY WOMEN

Child-rearing, particularly in urban society, has become rather exclusively a maternal responsibility, though there are indications that men are beginning to seek greater participation, and are creating new structures which permit them to do so. However, at this point, a teacher who is also a mother is likely to have primary responsibility for the care and rearing of her children.

Women have found that they are able to combine work and home responsibilities quite well if they are teachers. Their working hours, vacation days and months, coincide with their children's. They are able to be home when needed.

Exercising their dual responsibility is usually much more difficult in jobs outside schools. Travel time will probably be longer, and problems are created by working hours and vacation times which do not coincide with those of their children. Many women do, of course, manage to combine homemaking with work in settings of all types.

However, if women are to participate in societal work outside the home and also carry primary responsibility for the rearing of the next generation, ways must be developed which enable them to more easily and satisfactorily discharge these dual responsibilities. Custodial care for children has been suggested as one answer. Flexible working hours, in response to home requirements, is another. Modification of work-places to include the young if they accompany parents to work on occasions might be another partial answer.

Various experiments are being conducted to discover new structures for work. Particularly needed are structures that enable both men and women to combine careers with active parenthood.

In addition to the obstacles presented by career and homemaking conflicts, women teachers who go job hunting will face sex discrimination. In 1970, eight million Americans were enrolled in vocational education programs. Many of these programs were open to men only; electrical or electronics technology, drafting, data processing, power machine operation, were often closed to women.[3] Sex discrimination which does not allow women to learn certain skills obviously restricts their teaching capacity and flexibility. No doubt equal rights legislation will soon end institutional sex discrimination. Even so, it is unlikely that women will readily be hired as trainers in traditionally male-oriented work. Because of the social and psychological factors involved in learning, trainers are necessarily chosen not only for their technical competence but for their acceptability to trainees in terms of culture, race, and status, as well as sex.

Women face not only external obstacles, but internal obstacles. Research has shown that they experience great anxiety when put into competition with men. They worry that they might fail, and they worry that they might succeed (Horner, 1969). Jerome Bruner, comparing the status of women educators in America and Europe asserted that "we Americans probably have more ways than most

to keep women from venturing: by using shame, guilt, and petty ridicule, apple-pie praise, and the rest. . . . Plainly, Western culture taught women to wait for things to happen and then make the most of them. And so one of the great problems in raising daughters is still to keep their initiative going. They too frequently worry lest they are acting too intellectual or too argumentative with men" (1970, p. 56). Women have been termed "portable roots" (Bennis, 1970), a term that implies that they move about on demand to nourish and support the lives of others, but they remain underground and their contributions are not expected to show or be rewarded.

Women of all races and cultures are limited both by their self-perceptions and expectancies, and by their acceptability to men as teachers and trainers. The attitude changes necessary to open opportunity equally to persons regardless of sex, as well as race, culture, religion, and economic and social status, have been clearly defined as pressing educational needs within our society.

## OPPORTUNITIES

The oversupply of teachers, although it creates problems, can also be viewed as an opportunity for teachers, employers, and the educational institution.

Teachers who cannot find positions in schools will need to look for jobs elsewhere. In the past, experience outside schools has not been considered a particular asset for teachers. However as school walls become more permeable, experience in a variety of settings will become increasingly valuable. Teachers who have first-hand experience in work-places outside schools will be more capable of connecting the world of school with the world of work. The oversupply provides teachers with the need, and opportunity, to enlarge their perspectives; they can move ahead and prepare themselves for possible future educational jobs, such as integrating the young into the functional life of the community.

The oversupply of teachers provides employers with an opportunity to hire persons who are likely to make useful contributions in various capacities. Many organizations conduct on-going training programs; teachers are obvious candidates for jobs in such programs in innovative knowledge organizations, which organize work around problems to be solved and tasks to be performed,

have a new and promising group to tap. The fact that the majority of job-hunting teachers will be women, and the additional fact that some, both men and women, will be members of racial and cultural minority groups can be viewed as a decided plus for many innovative organizations. The perspectives, experience, value-orientations, and emotional apparatus of women and minority-group teachers can be particular assets in setting goals, finding direction, supplying input and feedback, and evaluating accountability.

## CONCLUSION: A MODEL TO EMULATE

Observers have noted that lawyers, unlike university graduates in other fields, always seem to be in demand by employers. "Law provides a special case; since law graduates can perform a wide variety of jobs, no good measures of demand exist. The supply in this field helps create the demand. If there is a larger supply, they all find employment; if fewer lawyers are produced, the jobs they now perform will be done in other ways" (Folger, et al 1970).

The unusual employability of lawyers probably depends on a number of factors. Lawyers possess knowledge and training which are in demand. They have high acceptability to employers, in terms of status. But, possibly most important, lawyers are hired not only to fill a present job; they are hired because it is expected that they will be flexible, will continue to learn, and will be able to grow into larger jobs with more responsibility.

The model provided by lawyers is a good model. It is good not only for lawyers, but for teachers; perhaps it is good for everyone.

Making the model a reality for teachers requires changes in attitudes and expectations on the part of teachers, educational institutions, and employers. It also requires that teachers equip themselves with worthwhile knowledge and skills, and that they meet the challenge to continue to grow.

Realization of the model would solve the problem of teacher supply and demand. It is a worthy goal to pursue. Possibly some day in the future it will be said of teachers, as of lawyers: "The supply in this field helps to create the demand."

# FOOTNOTES

## CHAPTER I

1. "The Magnitude of the American Educational Establishment," *Saturday Review*, December 18, 1971, p. 68. Figures based on available estimates from the U.S. Office of Education and the National Educational Association.
2. "Teacher Surplus is Paying off for Schools," School Administrators Opinion Poll, *Nation's Schools*, 83:38, October, 1971.
3. Bureau of the Census, Current Population Reports Sources: 0.25, No. 475.
4. "Occupational Manpower and Training Needs," Bulletin 1701, U.S. Department of Labor, 1971, pp. 34-35.
5. "Teacher Surplus is Paying off for Schools," Opinion Poll, *Nation's Schools*, 83:38, October, 1971.
6. Sources for remedies include the following:

   *Teacher Supply and Demand in Public Schools, 1970*, National Education Association, Research Division, NEA Res. Div. Rep. 1970-R, 14:1–79.

   W. S. Graybeal, "Teacher Surplus and Teacher Shortage," *Phi Delta Kappan*, 53:82–5, October, 1971.

   D. Davies, "Teacher Numbers Game," *American Education*, 6:7–8, October, 1970.

   M. H. Bartels, "Index of Teacher Demand," *Educational Forum*, 35:243–6, January, 1971.

   S. M. Lambert, "Teacher Surplus: Fact or Fancy," *School and Society*, 99:393–4, November, 1971.

   "The Teacher Surplus is Paying off for Schools," Opinion Poll, *Nation's Schools*, 83:38, October, 1971.

"Better Utilization Needed," *School and Society*, 100:3–5, January, 1972.

**CHAPTER II**

1. *Saturday Review*, Dec. 18, 1971, "The Magnitude of the American Educational Establishment," p. 68.
2. *The New York Times Encyclopedic Almanac, 1971*, "Expenditures for Public School Education," p. 517, produced by the New York Times Book and Education Division, eds. Leo Foster and Morris Harth.
3. *The New York Times*, Monday, January 10, 1972, "Budget Crisis Spurs a Reappraisal of Goals," p. 24E.
4. *The New York Times*, Monday, January 10, 1972, "John Serrano Jr., et al, and School Tax Equality," p. 26E.
5. The Report of the Commission on Population Growth and the American Future, *Population and the American Future*, Signet Special from New American Library, New Jersey, March, 1972.

**CHAPTER III**

1. U.S. Department of Labor, *Occupational Outlook Handbook*, 1972–73 edition, p. 14.

**CHAPTER IV**

1. The Report of the Commission on Population Growth and the American Future, *Population and the American Future*, Signet Special from New American Library, New Jersey, March, 1972.
2. *Ibid.*, p. 48.
3. *Ibid.*, p. 155.

## REFERENCES


Allen, Vernon L., Ed. *Psychological Factors in Poverty*. Chicago: Markham Publishing Co. 1970

Arons, Stephan. "Compulsory Education: The Plain People Resist." *Saturday Review*, January 15. 1972

Benne, Kenneth; Chin, Robert; and Bennis, Warren, Eds. "Science and Practice." A chapter in *The Planning of Change*, 2nd edition. Eds., W. Bennis, K. Benne, R. Chin. New York: Holt, Reinhart & Winston, 1970. Reprinted from the first edition, 1961. 1961

Bennis, Warren G. "Organic Populism: A Conversation with Warren G. Bennis and T. George Harris." *Psychology Today*, February, 1970. 1970

Bennis, Warren G. "Theory and Method in Applying Behavioral Science to Planned Organizational Change." *The Journal of Applied Behavioral Sciences*, I, No. 4, 1965, 337–359. Reprinted in *The Planning of Change*, 2nd edition. Eds., W. Bennis, K. Benne, R. Chin. New York: Holt, Reinhart & Winston, 1970. 1965

Bennis, Warren G.; Benne, Kenneth D.; Chin, Robert, Eds. *The Planning of Change*. 2nd Edition. New York: Holt, Rinehart & Winston, Inc. 1969

Bereiter, Carl. "A Time to Experiment with Alternatives to Education." Chapter 2 in *Farewell to Schools???* Eds., Daniel U. Levine and Robert J. Havighurst. Worthington, Ohio: Charles A. Jones Publishing Co. 1971

Boulding, Kenneth E. *The Meaning of the 20th Century: the Great Transition*. New York: Harper & Row. 1965

Bruner, Jerome. "Bad Education—A Conversation with Jerome Bruner and Elizabeth Hall." *Psychology Today*. December, 1970. 1970

Clark, Kenneth B. "Alternatives to Urban Public Schools." Chapter 11 in *The Schoolhouse in the City*, Ed., Alvin Toffler. New York: Praeger Publishers. 1968

Clinard, Marshall B. "The Role of Motivation and Self-Image in Social Change in Slum Areas." Chapter 17 in *Psychological Factors in Poverty*. Chicago: Markham Publishing Co. 1970

Cohen, Wilbur J. "Education and Learning," in Bertram M. Gross, Ed., *Social Intelligence for America's Future*. Boston: Allyn and Bacon, Inc., 1969. 1969

Coleman, James S. et al. *Equality of Educational Opportunity*, Washington, D.C.: U.S. Government Printing Office. 1966

Coleman, James S. "The Children have Outgrown the Schools," *Psychology Today*, February, 1972. 1972

Drucker, Peter. *The Age of Discontinuity: Guidelines to Our Changing Society*. New York: Harper & Row. 1968–69

Erikson, Erik H. *Identity Youth and Crisis*. New York: W. W. Norton & Co. Inc. 1968

Etzioni, Amitai. "The Educational Mission." Chapter 10 in *Farewell to Schools???* Eds., Daniel U. Levine and Robert J. Havighurst. Worthington, Ohio: Charles A. Jones Publishing Co. 1971

Featherstone, Joseph. "The Talent Corps: Career Ladders for Bottom Dogs." *The New Republic*, September 6–13, 1969. Reprinted in *Essays on New Careers: Social Implications for Adult Educators*, Eds., Frank Riessman et al. Syracuse University. July, 1970. 1969

Folger, John K.; Astin, Helen S.; Bayer, Alan E. *Human Resources in Higher Education*, Russell Sage Foundation, 1970. 1970

Ford, Robert N. "The Obstinate Employee." *Psychology Today*, November, 1969. 1969

Friedenberg, Edgar Z. *The Vanishing Adolescent*. New York: Dell Publishing Co. 1959

Friedenberg, Edgar Z. "Status and Role in Education." *The Humanist*, Sept.-Oct. 1968. Reprinted in *Crisis in American Institutions*. Little Brown & Company, 1970.

Freire, Paulo. *Pedagogy of the Oppressed*. New York: Herder & Herder. 1971

Gartner, Alan & Riessman, Frank. "Paraprofessionals, Their Organization and the Unions." A chapter in *Essays on New Careers: Social Implications for Adult Educators*, Eds., Frank Riessman, et al. Syracuse University, July, 1970.

Glidewell, John C. and Swallow, Carolyn S. *The Prevalence of Maladjustment in Elementary Schools*. A report prepared for the Joint Commission on the Mental Health of Children. The University of Chicago, July 26, 1968.

Goodman, Paul. Selection from "The New Reformation: Notes of a Neolithic Conservative." Chapter 3 in *Farewell to Schools???* Eds., Daniel U. Levine and Robert J. Havighurst. Worthington, Ohio: Charles A. Jones Publishing Co. 1971. From *New Reformation*. New York: Random House, 1970.

Gordon, Edmund W. "Some Theoretical and Practical Problems in Compensatory Education as an Antidote to Poverty." Chapter 16 in *Psychological Factors in Poverty*, Ed., Vernon L. Allen. Chicago: Markham Publishing Co.

Graubard, Allen. "In-Community Teacher Training Idea." Mimeographed paper. Cambridge, Mass.

Greene, Maxine. "To the Deschoolers." Chapter 11 in *Farewell to Schools???* Eds., Daniel U. Levine and Robert J. Havighurst. Worthington, Ohio: Charles A. Jones Publishing Co.

Gurin, Gerald. "An Expectancy Approach to Job Training Programs." Chapter 14 in *Psychological Factors in Poverty*, Ed., Vernon L. Allen. Chicago: Markham Publishing Co.

Hart, Richard and Saylor, J. Galen. *Student Unrest: Threat or Promise*. Washington, D.C.: Association for Supervision and Curriculum Development, NEA.

Horner, Matina. "Women's Will to Fail." *Psychology Today*, November, 1969.

Hunt, J. McVicker. "Poverty Versus Equality of Opportunity." Chapter 3 in *Psychological Factors in Poverty*, Ed., Vernon L. Allen. Chicago: Markham Publishing Co.

Illich, Ivan. "Education Without School: How It Can Be Done." Chapter 4 in *Farewell to Schools???* Eds., Daniel U. Levine and Robert J. Havighurst. Worthington, Ohio: Charles A. Jones Publishing Co.

Illich, Ivan. *Deschooling Society*. New York: Harper & Row.

Jackson, Philip W. "A View from Within." Chapter 5 in *Farewell to Schools???* Daniel

1971 U. Levine and Robert J. Havighurst, Eds. Worthington, Ohio: Charles A. Jones Publishing Co.

Jencks, Christopher. "The Coleman Report and the Conventional Wisdom." An es-
1972 say in *On Equality of Educational Opportunity*, Frederick Mosteller and Daniel Moynihan, Eds. New York: Random House.

Kozol, Jonathan. *Death at an Early Age*. Boston: Houghton Mifflin Co.
1967

Krug, Mark M. *What Will Be Taught—The Next Decade*. Itasca, Ill.: F. E. Peacock
1972 Publishers, Inc.

Lawrie, J. W. "Making It the Hardest Way." *Psychology Today*. November, 1969.
1969

Mosteller, Frederick & Moynihan, Daniel, Eds. *On Equality of Educational Opportun-*
1972 *ity*. New York: Random House.

Moynihan, Daniel P. "Can Courts and Money Do It?" *The New York Times Annual*
1972 *Education Review*. Monday, January 10, 1972. p. 1E continued to p. 24E.

Musgrove, F. *Youth and the Social Order*. Indiana University Press, 1965.
1965

Ohliger, John. "The Educational Future of the Incipient Revolution: Total Manipula-
1971 tion or Faith in Man's Ability to Choose?" Chapter 6 in *Farewell to Schools???*, Daniel U. Levine and Robert J. Havighurst, Eds. Worthington, Ohio: Charles A. Jones Publishing Co.

Pearl, Arthur. "The Poverty of Psychology—An Indictment." Chapter 18 in *Psycho-*
1970 *logical Factors in Poverty*, Vernon L. Allen, Ed. Chicago: Markham Publishing Co.

Peck, Robert F. "Promoting Self-Disciplined Learning: A Researchable Revolu-
1971 tion." Chapter 5 in *Research in Teacher Education*, A Symposium, Ed. by B. Othanel Smith for the American Education Research Association. New Jersey: Prentice Hall, Inc.

Poppy, John. "Child of the Commune." *Saturday Review*, February 5, 1972.
1972

Ravin, Arnold. "Human Guidance of Human Evolution: Possibilities and Problems."
1972 *The University of Chicago Magazine*. Volume LXIV, Number 4. March/April, 1972.

Reimer, Everett & Illich, Ivan. "Proposal for a Planning Seminar Aimed at the Devel-
1971 opment of the Basic Educational Alternatives." Chapter 1 in *Farewell to Schools???*, Daniel U. Levine and Robert J. Havighurst, Eds. Worthington, Ohio: Charles A. Jones Publishing Co.

Reissman, Frank; Rosen, Sumner; Featherstone, Joseph; Gartner, Alan. *Essays on*
1970 *New Careers: Social Implications for Adult Educators*. Syracuse University Publications in Continuing Education, July, 1970.

Riessman, Frank. "Training the New Manpower." A chapter in *Essays on New Ca-*
1970 *reers: Social Implications for Adult Educators*. Syracuse University Publications in Continuing Education, July, 1970.

Schiff, Sheldon. "Training the Professional." *The University of Chicago Magazine.* 1970 January/February, 1970.

Silberman, Charles. *Crisis in the Classroom.* New York: Random House. 1970

Swift, David W. "Changing Patterns of Pupil Control." *The Educational Forum 36:* 1972 199–208 January, 1972.

Thelen, Herbert. "Learning by Teaching." A Report of a Conference on Helping Relationship in the Classroom. University of Chicago, 1968. 1968

Thelen, Herbert. *Education and the Human Quest.* Phoenix Edition, University of 1972 Chicago Press: 1972. First edition, Harper and Brothers. New York 1960.

Von Haden, Herbert I. and King, Jean M. *Innovations in Education: Their Pros and* 1971 *Cons.* Worthington, Ohio: Charles A. Jones Publishing Co.

Wagschal, Peter H. "An Impractical Proposal." Chapter 8 in *Farewell to Schools???,* 1971 Daniel U. Levine and Robert J. Havighurst, Eds. Worthington, Ohio: Charles A. Jones Publishing Co.

Wheeler, Harvey. "Technology: Foundation of Cultural Change." *The Center Maga-* 1972 *zine.* Volume V Number 4 July/August 1972. p. 48–58.